

Marine Life Protection Act Initiative



Size and Spacing Evaluations of the Round 3 NCRSG MPA Proposal for the North Coast Study Region

Presentation to the MLPA Master Plan Science Advisory Team
October 14, 2010 • Eureka, CA

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Notes on Round 3 Evaluations

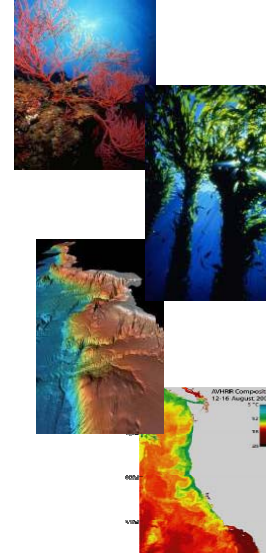


- **Results are presented for very high protection MPAs:**
 - **No high protection MPAs** were included in the Round 3 NCRSG MPA proposal (NCP), thus evaluations at high protection are omitted from all evaluation materials.
 - **Only one mod-high protection MPA** proposed, thus evaluations at mod-high protection are omitted from this presentation but included in other evaluation materials.
- **The supplemental evaluation** (abbreviated SUP) requested by the BRTF includes:
 - All MPAs at **moderate-high protection or above**.
 - MPAs **below moderate-high protection** if the **only** proposed uses that reduced the LOP below moderate-high were those intended to accommodate tribal uses.



MLPA Goals*: Populations

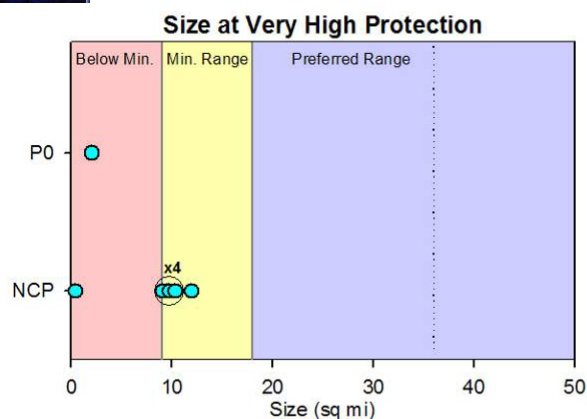
1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as **a network**.



* Note that this language represents a summary of the MLPA goals



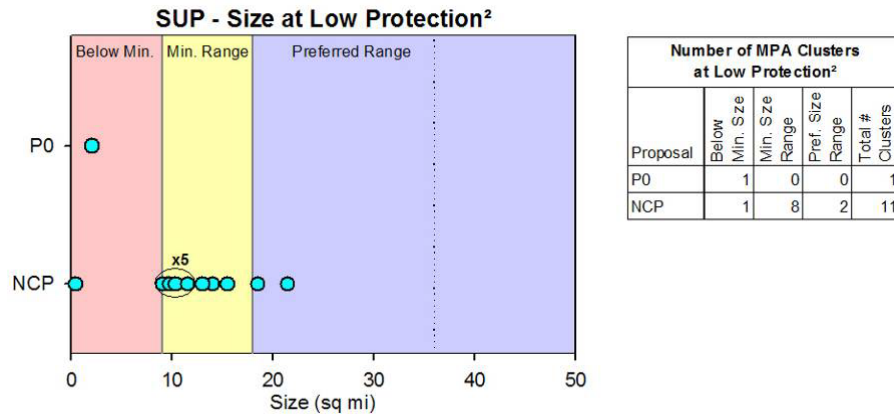
Cluster Sizes: Very High Protection



Number of MPA Clusters at Very High Protection				
Proposal	Below Min. Size	Min. Size Range	Pref. Size Range	Total # Clusters
P0	1	0	0	1
NCP	1	5	0	6

- At very high protection, most MPAs are within the minimum size range and no MPAs are within the preferred size range.
- At moderate-high protection (not shown) one MPA within the minimum size range is added.

Cluster Sizes: Supplemental Evaluation



- In the supplemental evaluation, several MPA clusters increase in size and two MPA clusters fall within the preferred size range.

² Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.

Design Guidelines: Goals 2 and 6



MPAs should be placed within 50-100 kilometers (31-62 miles) of each other to facilitate dispersal and connectedness of important bottom-dwelling fish and invertebrate groups among MPAs.



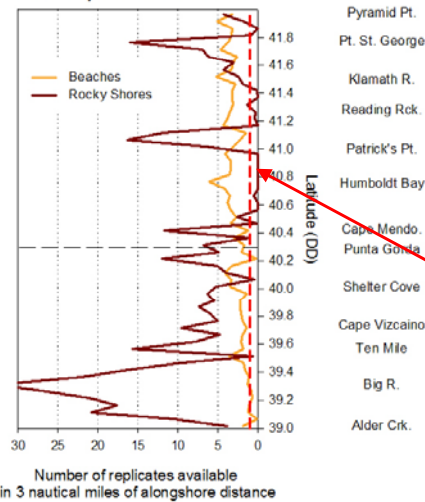
Because many populations are habitat-specific, spacing is evaluated for each habitat.



Habitat Distribution in the NCSR

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Availability of Shoreline Habitats



Replicates of beach habitat are available throughout the NCSR.

Replicates of rocky shore habitat are available along most sections of coast, with the exception of the area near Humboldt Bay.



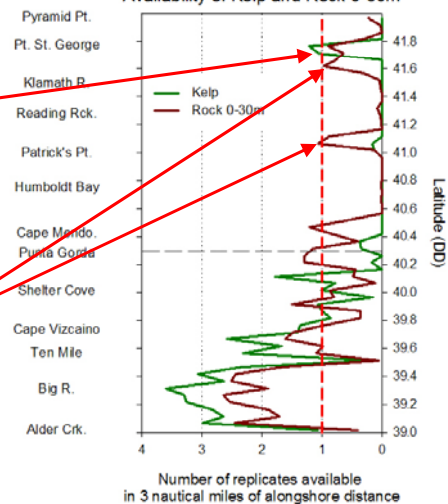
Habitat Distribution in the NCSR

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Replicates of kelp habitat are rare north of Shelter Cove and available only near Crescent City.

Replicates of rock 0-30m habitat are rare north of Cape Mendocino and available only near Crescent City and Trinidad.

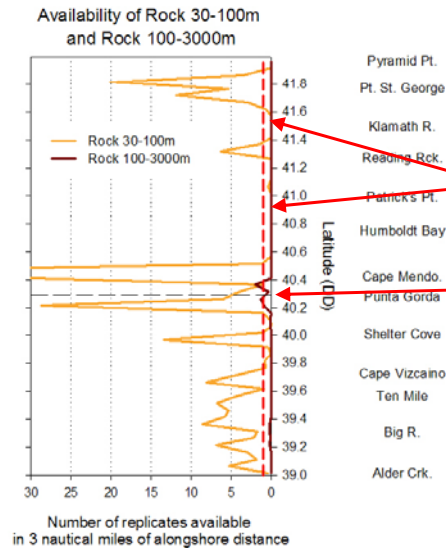
Availability of Kelp and Rock 0-30m





Habitat Distribution in the NCSR

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Replicates of rock 30-100m habitat are available along most sections of coast, with the exception of areas near the Klamath River and Humboldt Bay.

Replicates of rock 100-3000m are available only near Cape Mendocino.

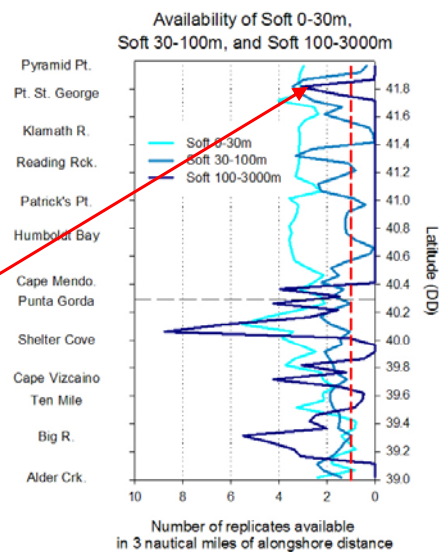


Habitat Distribution in the NCSR

10

Replicates of soft 0-30m and soft 30-100m habitat are available along most sections of the coast.

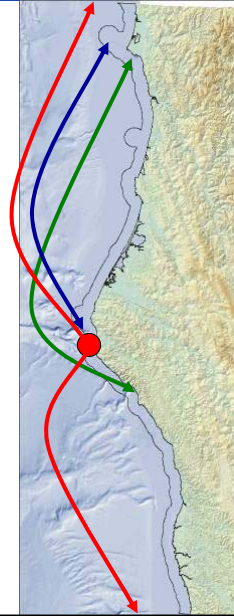
Replicates of soft 100-3000m habitat are rare north of Cape Mendocino and available only near Point Saint George.





Spacing: Unevenly Distributed Habitats

- For some unevenly distributed habitats, spacing guidelines are impossible to meet.
- Minimum possible spacing for these habitats:
 - Kelp: 115 miles (mi)**
 - Deep soft bottom (100-3000m): 95 mi**
 - Deep rock (100-3000m): 110 mi**
only available in one area in the NCSR



Spacing to Existing MPAs in NCCSR



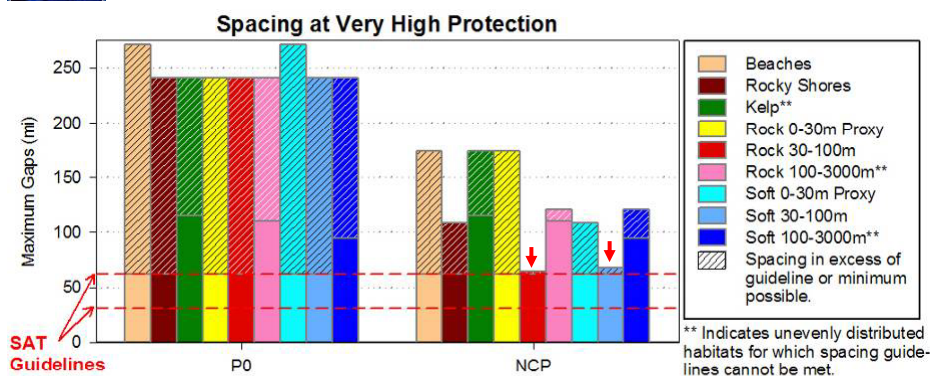
Spacing is calculated to the nearest protected habitat to the south (in north central coast MPAs).



Recent changes to the Stewarts Point SMR and correction of previous errors add 30 miles to spacing for beach and soft 0-30m habitat.

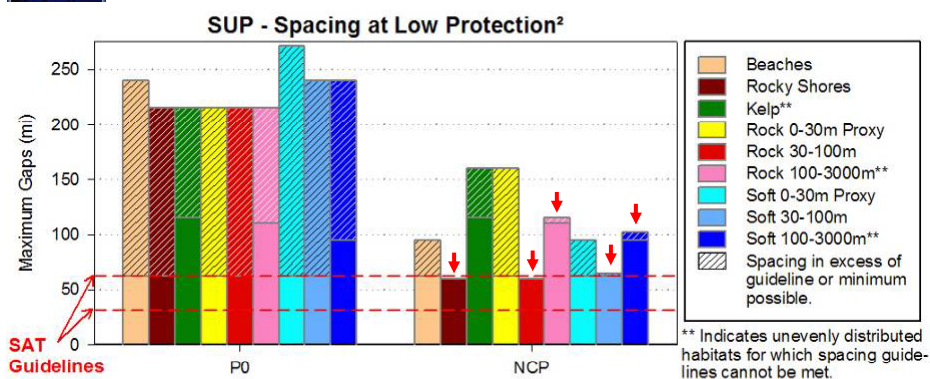
- The nearest beach and soft 0-30m habitat replicates are at Bodega Head SMR, approximately 58 miles south of the NCSR boundary.

Max Gaps: Very High Protection



- Not possible to meet spacing guidelines for kelp, rock 100-3000m, or soft 100-3000m habitats.
- NCP approaches the spacing guidelines for rock 30-100m and soft 30-100m.

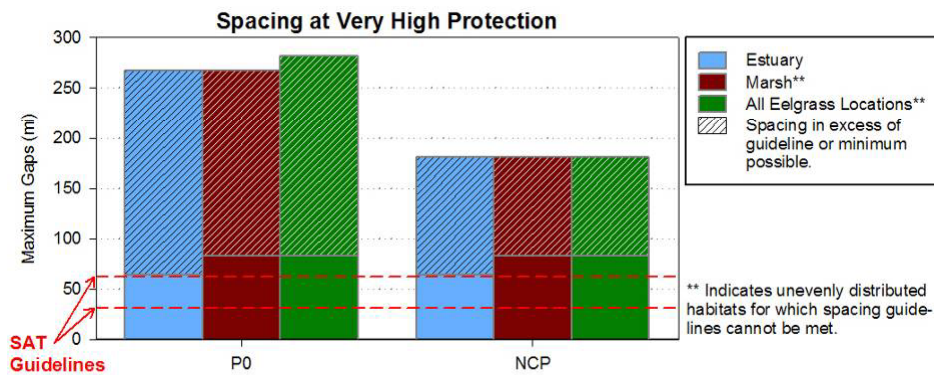
Max Gaps: Supplemental Evaluation



- NCP achieves or approaches the spacing guidelines or minimum possible spacing for 5 habitats.
- Spacing gaps remain for beaches, kelp, rock 0-30m, and soft 0-30m.

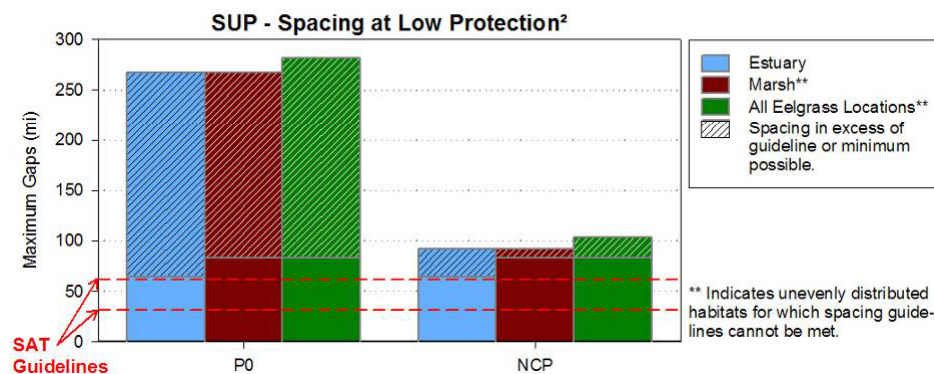
² Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.

Estuarine Spacing: Very High Protection



- Not possible to meet spacing guidelines for marsh or eelgrass habitats due to uneven distribution of these habitats.
- All estuarine habitats are replicated only at Ten Mile estuary, thus the largest gaps extend from Ten Mile estuary north to Oregon.

Estuarine Spacing: Supplemental Evaluation



- NCP approaches minimum possible spacing for marsh habitat.
- The largest spacing gaps for estuary and eelgrass extend from Ten Mile estuary to replicates in the NCCSR (at the Russian River and Estero Americano respectively).

² Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



Summary of Habitat Evaluations

Guidelines Achieved



At or above mod-high protection:

- All but one MPA within the minimum size range.
- NCP achieves or approaches guidelines or minimum possible spacing for 3 habitats: rock 30-100m, rock 100-3000m, and soft 30-100m.



Supplemental evaluation²:

- All but one MPA within the minimum or preferred size range.
- Two MPAs in the preferred size range.
- NCP achieves or approaches guidelines or minimum possible spacing for 5 habitats: rocky shores, rock 30-100m, rock 100-3000m, soft 30-100m, and soft 100-3000m.

² Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



Summary of Habitat Evaluations

Guidelines Not Achieved



At or above mod-high protection:

- No MPAs within the preferred size range.
- Spacing gaps for 9 of 12 key habitats substantially exceed the guidelines or minimum possible spacing: beaches, rocky shores, kelp, rock 0-30m, soft 0-30m, soft 100-3000m, estuary, marsh, and eelgrass.



Supplemental evaluation²:

- Spacing gaps for 6 of 12 key habitats substantially exceed the guidelines or minimum possible spacing: beaches, kelp, rock 0-30m, soft 0-30m, estuary, and eelgrass.

² Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.